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Mr. Manuel Vargas
Puerto Rico Environmental Quality Board (EQB)
11th Floor
431 Ponce de Leon Avenue
Hato Rey, Puerto Rico 00917

Re: Response to EQB Comments

Guanajibo River Surface Water and Sediment Sampling Plan

Hewlett-Packard Voluntary Remediation Project

San German, Puerto Rico

Dear Mr. Vargas:

GZA GeoEnvironmental, Inc., on behalf of Hewlett-Packard Company (HP), is responding to the EQB's letter dated October 6, 2003 and received November 5, 2003 (Surface Water and Sediment Sampling and Analysis Plan). The EQB comments are listed below along with our response.

 $EQB \ Comment # 1$ — The Plan does not include any background information of the river. It is also necessary to include the overall depth of the river.

HP Response to # 1 – The Guanajibo River is located approximately 1,000 feet south and 2,000 feet west of the site and flows in a generally westerly to northwest direction. The approximate depth in the center of the river during November / December is ten feet. River flow varies significantly due to seasonal fluctuations in precipitation and runoff. The mean-annual flow of the river near Hormigueros is about 200 cubic feet per second. On a monthly basis, the 90-percent duration (defined as the discharge which is exceeded 90-percent of the time) of the river near Hormigueros ranges from 10 cubic feet per second in June to approximately 115 cubic feet per second in October and November. The river surface water and sediment were sampled in 1993. No evidence of site contaminants was found.

EQB Comment # 2 - The locations of the sampling points were not justified. It is necessary to understand if these sampling points were selected randomly or for example,

were the result of specific information gathered by the company in past investigations. Also, related to the sampling points, it is important to clarify the following:

- Regarding the locations of the sampling points, the Plan does not explain if field oversight was performed to verify the access to these locations. It is recommended a field oversight (if not yet performed) previous to the sampling date with the purpose to perform recognition of the area, select the specific sampling points and evaluate any possible constraints of the area.
- Regarding the up-gradient samples, the Plan indicates that the samples GZA-SW-1 / GZA-SD-1 and GZA-SW-2 / GZA-SD-2 will be obtained up-gradient (northwest) of the site. However, on past investigations the company indicated that the regional site hydrogeology anticipated non-purging groundwater flow is west-northwest toward the Guanajibo River. It raises the issue, if these samples really represent the concentrations normally observed in the environment or are influenced by the company. It is recommended to check this with a geologist.

HP Response to # 2 – GZA personnel have inspected the river during past trips to the site. The sampling locations are based on GZA's observations of the river, access points to the river, and on the regional groundwater flow direction (west / northwest). A revised sampling location drawing is attached showing the four sampling locations:

- GZA-SW-1/GZA-SD-1 Upgradient (southeast) of the site;
- GZA-SW-2/GZA-SD-2 Upgradient (southeast) of the site;
- GZA-SW-3/GZA-SD-3 Downgradient (west) of the site; and
- GZA-SW-4/GZA-SD-4 Downgradient (northwest) of the site.

The two upgradient sampling locations (GZA-SW-1/GZA-SD-1 and GZA-SW-2/GZA-sd-2) are reflective of background conditions.

EQB Comment # 3 – Indicate the proposed action levels that will be used to determine if there exists contamination at the surface water or sediment.

HP Response to # 3 – In 1993 the river was sampled and no site-related contamination was detected. It is doubtful that site contamination is present in the river today. If site-related contamination is detected above the upgradient background levels during this sampling event, GZA will perform a risk assessment to calculate appropriate action levels based on the probable exposure scenarios for the river.

EQB Comment # 4 – Include the parameters that will be used to measure the quality of the water like dissolved oxygen, pH, temperature, conductivity and oxidation (reduction potential).

HP Response to #4 - Water quality parameters collected at each sampling location will be dissolved oxygen, pH, temperature and conductivity.

EQB Comment # 5 - On the Appendix B-3, second paragraph, the company indicates that a dedicated plastic container will be used to collect the surface water samples. As a



reminder, the recommended materials for sampling organics are: polyethylene, Teflon, glass or stainless steel.

HP Response to # 5 – GZA will follow the QAPP, Revision I, dated August 2000, which specifies the use of glass sampling containers for organics in water.

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EQB Comment # 6 – The Plan indicates that the parameters under consideration are volatile organic compounds (VOCs). It is necessary that the parameters of the specific organics in accordance with the established QAPP, Revision I (August 2000). Also the Plan only mentions the collection of a duplicate sample for quality control / quality assurance purpose. The company must include all the Field and Laboratory Quality Control Requirements applicable, according with the QAPP, Tables 14 and 15 respectively.

HP Response to #6 – The QAPP controls the specific organics to be analyzed for by the analytical method number. In this case the QAPP specifies analytical Method 8021B for volatile organic compounds. The analytical lab will be analyzing for all the analytical parameters listed under EPA Method 8021B.

In addition to the field duplicate sample, the quality assurance samples taken will be as specified in the QAPP.:

- · VOC trip blank;
- · Field blank;
- Equipment blanks (one for surface water and one for sediment);
- Lab method blank;
- · Lab duplicate;
- Lab matrix spike;
- One Lab random rerun; and
- Lab surrogate recoveries.

EQB Comment # 7 – Indicate the preservation and holding times for the sediment samples.

HP Response to #7 - The preservation method of the sediment samples is to maintain a storage / shipping temperature of 4 degrees Celsius plus or minus 2 degrees. Holding time is 14 days. See Table 6, page 23 in the QAPP.

EQB Comment # 8 – The Standard Operating Procedures included at Attachment A, present different sampling options. The company has to clarify if Method B – pond sampler will be used for the surface water collection and if Method A – hand corer will be used for sediment collection.

HP Response to #8 – Method B (Pond Sampler) will be used to collect the surface water samples. Surface water samples will be taken in the center of the river width. Method A (Hand Corer) will be used to collect the sediment samples. Sediment samples will be

taken where the water depth is just under three feet and the samples will be taken on the side of the river closest to the site.

Please contact me at (603) 623-3600, Ext. 4239 if you have any questions regarding the above. The sampling of the river surface water and sediment will be performed upon EQB's approval of the sampling plan.

Sincerely,

GZ

Michael Asselin

Senior Project Manager

cc: Manning, Lee - Hewlett-Packard



